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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,813	02/22/2002	Zuyin Yang	021238-476	9865
7590	12/16/2003			
Peter K. Skiff BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404			EXAMINER WALLS, DIONNE A	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/079,813	Applicant(s) YANG ET AL.	
	Examiner Dionne A. Walls	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's affirmation of the election of the Restriction Requirement, included in the previous Office Action, is acknowledged. Because Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

2. Claims 1-3, 7, 9 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keritsis (US. Pat. No. 5,133,367) in view of Hu et al (US. Pat. App. Pub. 2002/0110689).

Keritsis discloses, in its "Background of Invention", that flavorants deposited on activated carbon particles in the filter section of a smoking article are well-known in the tobacco art (see col. 1, lines 33-37). Keritsis may not specifically articulate that the flavorants deposited (and, hence, subsequently absorbed/adsorbed) on the carbon particles are done via introducing fluidizing gas, i.e. nitrogen, into a vessel to fluidize said particles, and then introducing the flavorant to the particles. However, depositing (which is synonymous with "coating") material onto activated carbon particles utilizing a continuous or periodic (corresponding to the claimed "batch") process, fluidized bed coater is well-known, and is even disclosed in Hu et al (see pages 2-3). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize fluidized bed coating to adsorb flavorant onto carbon particles which

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will be incorporated into a filter for a cigarette, since depositing material on carbon particles via fluidization is known in many arts.

Regarding claims 2 and 19, one having ordinary skill in the art would have been motivated to add the claimed amount of flavorant to the carbon particles in order that an effective amount can be released into the mainstream smoke upon the use of the cigarette.

Regarding claim 3, in conventional fluidized bed coater processes, elevated temps or other forms of energy causes drying or curing of the coating material on the particles. This language suggests that it is not necessary to *heat* the carbon particles, in order to effectuate a drying or curing of said coating material. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to practice the fluidization process without the application of elevated temperatures so as to heat the particles, but with the application of other forms of energy, instead, to effectuate the drying/setting of the flavorant on the carbon particles.

Regarding claim 9, while there is no explicit articulation regarding the amount of time of the fluidization process, one having ordinary skill would have arrived at the claimed amount of time after routine experimentation to optimize the time length required to ensure effective flavorant adsorption into the carbon particles.

Regarding claims 18 and 20, while the disclosure of Keritsis modified by Hu et al may not specifically state that the carbon particles are at a temperature of from 40 – 70 degrees F while in a fluidized state, Hu et al does state that the fluidization of the carbon particles can be carried out by any number of apparatus, including Wurster-type devices

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such as those disclosed in Nuwayser et al (US. Pat. No. 4,623,588) – which is incorporated by reference into the disclosure of Hu et al. In this reference, the Wurster apparatus operates at temps ranging from 66-69 degrees F (see col. 8, lines 43-44). Therefore, it follows that one having ordinary skill in the art could have opted to utilize this device – operated under these conditions – in order to effectively deposit flavorant onto the carbon particles.

3. Claims 4, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keritsis (US. Pat. No. 5,133,367) in view of Hu et al (US. Pat. App. Pub. 2002/0110689), further in view of Wurster et al (US. Pat. No. 3,241,520).

While Keritsis modified by Hu et al may not specifically articulate that the process is carried out in a vessel containing a plurality of compartments through which the activated carbon particles pass sequentially while in the fluidized state, Wurster et al discloses a fluidized bed coater having such features (see fig. 13). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize a vessel having these compartments in order to ensure uniform distribution of the coating material on the discrete particles since all particles follow essentially the same path through the apparatus, as taught in Wurster et al (see col. 3, lines 56-58).

Regarding claim 21, one having ordinary skill in the art would have been motivated to add the claimed amount of flavorant to the carbon particles in order that an effective amount can be released into the mainstream smoke upon the use of the cigarette.

Regarding claim 22, while the disclosure of Keritsis modified by Hu et al and Wurster et al may not specifically state that the carbon particles are at a temperature of from 40 – 70 degrees F while in a fluidized state, Hu et al does state that the fluidization of the carbon particles can be carried out by any number of apparatus, including Wurster-type devices such as those disclosed in Nuwayser et al (US. Pat. No. 4,623,588) – which is incorporated by reference into the disclosure of Hu et al. In this reference, the Wurster apparatus operates at temps ranging from 66-69 degrees F (see col. 8, lines 43-44). Therefore, it follows that one having ordinary skill in the art could have opted to utilize this device – operated under these conditions – in order to effectively deposit flavorant onto the carbon particles.

4. Claims 5-6 are rejected over Keritsis (US. Pat. No. 5,133,367) in view of Hu et al (US. Pat. App. Pub. 2002/0110689), further in view of Urbanic (US. Pat. No. 3,889,691).

Keritsis modified by Hu et al may not specifically state the size of the carbon particles of its invention; however, it's well-known that activated carbon particles available on the market, and used in cigarette filters, typically have the claimed mesh/mm size, and such size (i.e. 12-40 mesh) is even disclosed in the Urbanic reference which discloses a tobacco filter containing activated carbon (see col. 3, lines 15-19). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize activated carbon particles having the claimed mesh size in the process of Keritsis and Hu et al since carbon having said size, and being utilized in cigarette filters, is known in the tobacco art.

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5. Claim 8 is rejected over Keritsis (US. Pat. No. 5,133,367) in view of Hu et al (US. Pat. App. Pub. 2002/0110689), further in view of Jones ("Controlling Particle size and Release Properties").

Keritsis modified by Hu et al may not specifically state that the vessel includes a gas exhaust conduit separated by from the interior of the vessel by a filter, which also includes a periodic blow-back of gas through the filter to clean activated carbon particles from the filter; however, Jones discloses a fluidized bed coater having such a filter (see pages 159 and 161). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize a vessel having such a filter in order to retain collected particles that accumulate from the fluidized air, and to prevent such particles from entering/clogging other parts of the vessel. Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a gas exhaust conduit on the top/other side of the filter on order to allow a recycling of gas, blown up through the vessel, back to the vessel gas inlet, for environmental and economic reasons. Lastly, filter blow-back techniques are well-known in many arts. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to include periodic blowback of gas through the filter in order to periodically clean filter surfaces.

Response to Arguments

6. Applicant's arguments filed September 11, 2003 have been fully considered but they are not persuasive.

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- Applicant argues that Keritsis discourages the use of additive materials in smoking articles because it discloses, in the "Background of Invention" section, problems that occur when such additive materials are added to smoking articles, and also, in the rest of the disclosure, teaches of using sealed containers containing additive materials for use in smoking articles. Applicant asserts that, if read in its entirety, Keritsis teaches away from providing a flavorant on activated carbon. The Examiner, however, respectfully disagrees. The Examiner has presented only the "Background of Invention" section of the Keritsis reference merely to establish what is already known in the art – that is – flavored, activated carbon. Keritsis was not presented for the purpose of showing the invention disclosed therein. The Examiner simply wanted to show that one having ordinary skill in the art would have already been aware of a process which provides for activated carbon particles with a flavoring coated/deposited thereon – based on what Keritsis has admitted as prior art. The Hu et al reference was provided for teaching that using a fluidized bed coater is merely one of several methods, already well-known, for depositing a coating upon activated carbon particles. While the Examiner admits that a "flavoring" is not specifically articulated as a type of coating that can be deposited upon particles, the disclosure of Hu et al makes it clear that activated carbon particles have been known to be coated – with any particular coating material - using a fluidized bed coater. This teaching, coupled with the disclosure in Keritsis that activated carbon particles are known to be coated with a flavorant, would motivate one having ordinary skill in the art to

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utilize the fluidized bed coater of Hu et al to apply flavorant to the activated carbon since this is one of numerous ways in which activated carbon particles can be coated. Therefore, the Examiner believes that the rejections, of the claims, over the Keritsis and Hu references (in addition to the others) are proper.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne A. Walls whose telephone number is (571) 272-1195 . The examiner can normally be reached on Mon-Fri; 7AM - 4:30PM (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone

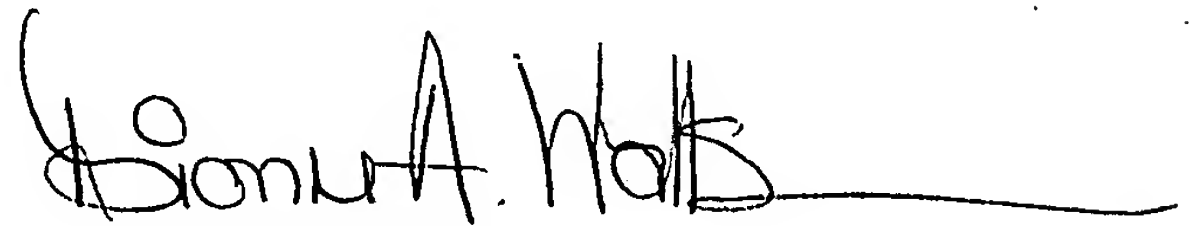
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number for the organization where this application or proceeding is assigned is (703)
872-9306.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703)308-
0661.

A handwritten signature in black ink, appearing to read "Dionne A. Walls", with a long horizontal line extending to the right.

Dionne A. Walls
Primary Examiner
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December 9, 2003